

# TECHNICAL NOTES

U.S. DEPARTMENT OF AGRICULTURE

SOIL CONSERVATION SERVICE

TN RANGE NO. 20

November 1981

The information in this Technical Note is from a Journal of Range Management article entitled "Relating Palatability of Seven Artemisia Taxa to Mule Deer and Sheep" authored by Dennis P. Sheehy, rancher, Wallowa, Oregon and Dr. Al H. Winward, Regional Ecologist, USFS, Ogden, Utah.

## SAGEBRUSH PALATABILITY STUDY

A study was recently completed on palatability of seven Artemisia taxa to mule deer and sheep. This study was located in areas near Silver Lake, Oregon and the Squaw Butte Experiment range near Burns, Oregon. Rocky Mountain mule deer (*Odocoileus hemionus* ssp. *hemionus* Rafinesque) and Columbia type range ewes were used in the trials.

Some of the important factors which should be considered as a result of this study include:

- (1) Both deer and sheep selected sagebrush at taxonomic levels finer than the species ranking. Consequently, it is important that we recognize sagebrush at the subspecies and form levels.
- (2) Factors which determine acceptability of a particular taxon are apparently genetically fixed and may have only slight modification by the environment.
- (3) Literature which represents high palatability ratings for a particular sagebrush taxon should be considered in light of which other sagebrush taxa and what other plant species were available for use. High palatability of other taxa does not necessarily suggest they will have high palatability in relation to other kinds of forage or that sagebrush is a good source of nutrients.
- (4) Programs directed toward management of sagebrush should consider as an additional factor, the relative palatability of the taxa involved.

- (5) On areas where sagebrush seeding or planting programs are contemplated for game range improvement, consideration should be given to the relative palatability of species which are adapted to the particular site.
- (6) More research is needed in selection and crossing of sagebrush taxa which would favor both their palatability and their tolerance to the environment of specific range sites.

In conclusion, mule deer showed highest preference for gray low sagebrush (*Artemisia arbuscula* Nutt. spp. *arbuscula*), mountain big sagebrush (*Artemisia tridentata* spp. *vaseyana* Rydb.), foothill big sagebrush (a recently recognized variety of mountain big sagebrush - similar to *A. tridentata xericensis*) and Bolander sagebrush (*Artemisia cana* spp. *bolanderi* Gray.). They showed intermediate preference for basin big sagebrush (*Artemisia tridentata* ssp. *tridentata* Nutt.), and Wyoming big sagebrush (*Artemisia tridentata* ssp. *wyomingensis* Beetle) and least preference for black sagebrush (*Artemisia arbuscula* ssp. *nova* Ward).

Sheep showed highest preference for gray low sagebrush and medium preference for black sagebrush. They utilized but did not prefer Bolander sagebrush and foothill big sagebrush and they showed least preference for Wyoming and basin big sagebrush.

Ref. Journal of Range Management, Vol. 34, No. 5, Pages 397-399,  
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